Health and Unpaid Care

Introduction
This paper is a report examining findings from the 2011 Census relating to the theme of 'Health and Unpaid Care.'

Data from all questions that relate to this theme have been examined, and compared to the national position, as well as to data from the 2001 census to examine how Lincolnshire has changed over the intervening 10 years.

Headlines

- The proportion of people over the age of 60 has grown in the 10 years between the 2001 and 2011 census – from 24.5% of Lincolnshire’s population in 2001 to 28.1% in 2011.

- This increase is proportionally even greater in East Lindsey, which has seen an increase in the over 60 population from 29 to 35% since 2001.

- Lincolnshire's age structure continues to have a higher proportion of elderly residents, and a lower proportion of younger residents, than the England norm. This is particularly pronounced in East Lindsey.

- Lincolnshire remains predominantly a low-wage, low skills economy with some areas of higher deprivation.

- The data from the census clearly depicts a link between poor health and an ageing population, and also supports a link between poor health and deprivation.
Age Structure

Lincolnshire has a higher percentage of over 60s than England – 28.1% compared to the England value of 22.3%.

These elderly residents are proportionally most numerous in East Lindsey, where over a third of the population – 35% - are over the age of 60.

Figures 1, 2, 3 and 4 demonstrate the population structure of different areas in Lincolnshire – East Lindsey and Lincoln districts have been chosen as they have very different age structures from the England and Lincolnshire profiles.

As can be seen by comparing Figures 1 and 2, England's age structure graph (population pyramid) is much narrower at the top – indicating a significantly smaller proportion of people over the age of 60.

The difference between the population pyramids for England and East Lindsey is dramatic. Figure 3 thus demonstrates the concentration of Lincolnshire's ageing population towards the east coast.

By contrast with figure 3, Lincoln's comparatively youthful population is seen from figure 4. Especially evident is the impact of further education in Lincoln, with the proportion of 20 to 24 year-olds in Lincoln the single highest proportion of any 5-year age band in any Lincolnshire district.
Lincolnshire’s ageing population will have a profound impact on the Health and Social Care services of the county. It is thus important to understand the relative location of these elderly people, and figure 5 gives an indication of where these people tend to live within Lincolnshire – in this case, the residential location of people over the age of 75 has been mapped as a proportion of the total population in each output area, and the results plotted as a heat map:

**Figure 5 – Location of people aged over 75**

In figure 5, areas coloured green have a higher proportion of over 75s in an census output area than the average (9%), and areas coloured red relate to output areas where the proportion of over 75s is over 20%. It can be seen from figure 5 that there are higher proportions of elderly people living on the east coast, and in areas such as Woodhall Spa (near Horncastle in the centre of the map). By contrast, the dark blue colours around Lincoln reflect the much younger population structure of this city.
General Heath

The link between age and the proportion of the population who report their general health as being 'bad or very bad' is demonstrated by the 2011 Census data for Lincolnshire; this proportion increases in a linear fashion from Age 16. East Lindsey, which has the highest percentage of all Lincolnshire districts of over 75s as a proportion of its population (Figure 3), has the highest rates of self-reported 'bad or very bad' general health, as figure 6 indicates. This is unsurprising given this high proportion of elderly residents.

Figure 6: Self-Reported Health Status

Nonetheless East Lindsey also has a higher proportion of people aged 16 to 49 reporting themselves as having 'bad or very bad' general health; 3.9%, which is nearly twice the proportion in South Kesteven (2.1%).

Although it may be assumed that this will be due to East Lindsey having a higher proportion of older people in this age group (as in, tending to have more people closer to 49 than 16) the data doesn't support this when analysed. East Lindsey has a very similar sub-structure to this age group when compared with West Lindsey and yet the proportion of people reporting 'bad or very bad' health is significantly lower in West Lindsey than in East Lindsey - 2.6% compared to 3.9%.

East Lindsey is ranked as the most deprived of Lincolnshire's Local Authority Districts in the Indices of Multiple Deprivation 2010. Thus the relative poorer self-reported health of East Lindsey residents supports a link between deprivation and poorer health outcomes. That further reinforces the importance of addressing the social determinants of health inequalities in the population of Lincolnshire, such as relative deprivation.
General Health and Ethnicity

When analysed by ethnicity, the percentage of people reporting their health as 'bad or very bad' is highest amongst those of 'White: English/Welsh/Scottish/Northern Irish/British' ethnicity – this is true for all ethnicities except the 'White: Irish' ethnicity, as demonstrated by Figure 7. This ethnicity not only has very small numbers in Lincolnshire, but analysis of the age structure of this ethnic group in Lincolnshire demonstrates that there is a much higher proportion of people aged over 65, which explains the high value for self-reported bad health owing to the clear connection between age and worsening health. Other ethnicities tend to have a lower proportion of people reporting bad health than the 'White British' ethnic population, for example in Lincolnshire only 2.9% of people of 'White Other' ethnicity report bad or very bad health, compared with 6.1% of White British people (figure 7). This is also likely to be due to the differing age structure of the relative populations, as just 4.2% of the 'White Other' in population in Lincolnshire are aged over 65, compared to 21.8% of 'White British' people. Please see the paper on ethnicity and migration for further study of the ethnicity and demography of the migrant population in Lincolnshire.

Figure 7: Percentage of Ethnic Group Reporting "Bad or Very Bad" health status
People Whose Day-to-Day Activities Are Limited

As has been seen when general health is examined, the proportion of people of all ages whose day-to-day activities are limited is greater in Lincolnshire than in England – 20.4% compared to 17.6% in England.

The proportion of people aged 16-64 whose day-to-day activities are limited is also greater in Lincolnshire – 14.1% compared to 12.7% in England, as demonstrated by figure 8.

This same pattern is seen when the data is split into those whose activities are limited 'a lot' and 'a little' – the proportion of such people remains consistently higher in Lincolnshire than in England. Within Lincolnshire, the highest proportions of this population are seen in East Lindsey.

Figure 8: Percentage of Population whose day-to-day activities are limited
**Long-Term Conditions**

The proportion of households having one person (or more) with a long-term health problem or disability is greater in Lincolnshire than in England – 27.1% compared to 25.7% in England.

Amongst Lincolnshire's districts, the proportion is highest in East Lindsey, where 30.9% of households have at least one person with a long-term health problem or disability – see figure 9.. Once again, this is attributable to the higher proportion of elderly people resident in the East Lindsey district.

**Figure 9: Long Term Conditions**

![Figure 9: Long Term Conditions](image)

**Unpaid Care**

So far a clear pattern is emerging; the 2011 Census data demonstrates that the poorest health outcomes in Lincolnshire tend to be for residents in East Lindsey. This area has both an ageing population and the highest level of deprivation, according to the Indices of Multiple Deprivation (2010). It is perhaps to be expected, then, that the provision of unpaid care will follow this pattern, after all, it is to be expected that the highest proportions of people who provide unpaid care would be found in the areas where the highest proportion of people who require care reside.
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The proportion of people in a broad population who require care would be expected to increase if that population becomes relatively more aged. The evidence from the Census supports this – we see that more people in Lincolnshire provide unpaid care than in England (figure 10). The headline figure here, though, is that the rate of people providing 50+ hours of unpaid care per week in East Lindsey is much higher than the England rate – 4.1% compared to 2.4%. Unpaid care provision is proportionally lower in Lincoln and South Kesteven, reflecting the younger age profile of Lincoln and the greater level of affluence in South Kesteven.

Figure 10: Unpaid Care Provision

An analysis of the age of unpaid carers demonstrates that the highest proportion of unpaid carers are found in the 50 to 64 Age group, where 20% of people provide some level of care in both Lincolnshire and England as a whole. For the age range above this (65+) the proportion decreases, and this is considered to be due in part to the longer life expectancy of females, with the proportion of unpaid carers reducing as the proportion of widowed individuals increases.

The proportion of people under the age of 24 providing some level of unpaid care is much lower – just 2.7% in Lincolnshire, slightly higher than the England value of 2.5%. This rate is highest in East Lindsey, where 3.6% of young people provide some level of unpaid care. It is important to note that although the rate of unpaid carers is much smaller in this age group, the potential impact on the life of the individuals concerned is much greater, and as such the smaller proportion should not detract from the status of young unpaid carers as a priority group for public sector support.
National Statistics Socio-economic Classification (NS-SeC)

The NS-SeC is a method of broadly dividing a population into socio-economic groups based around occupation. There are eight categories, covering the range of employment types from ‘Higher managerial, administrative and professional occupations’ through to ‘Never worked and long-term unemployed’.

This method allows us to examine the link between health and employment, and to examine differences between the districts of Lincolnshire and between Lincolnshire and England in general.

Analysis of the data from the 2010 Census indicates that Lincolnshire has higher levels of employment than average across England, but with more people in routine or semi-routine occupations – see Figure 11:

Figure 11: Lincolnshire and England NS-SeC Profile
This low-skills economy is most pronounced in Boston LAD, where over 40% of people are classified in groups 6 or 7, 'semi-routine' and 'routine' occupations. In England these groups represent just over a quarter of all people, in Lincolnshire the figure is just over 30%. North Kesteven has the lowest proportion of these groups in Lincolnshire, with figures approaching the England value at 26%. North Kesteven also has the lowest proportion amongst the Lincolnshire districts of people classified as 'never worked or long-term unemployed', just 3.4%, lower than the England value of 5.9%, and this evidences the relatively affluent nature of North Kesteven. Only in Lincoln is the proportion of people in this classification higher than the England value, and only just – 6% in Lincoln compared to 5.9% in England are classed as 'never worked or long-term unemployed.'

Perhaps unsurprisingly, there is a clear link (both nationally and locally) between poor health, long-term-conditions, and the NS-SeC classification 'never worked or long-term unemployed.' By far the highest proportion of people who reported 'bad or very bad' health are given the NS-SeC classification 'never worked and long-term unemployed' – nationally, over 15% of people in this classification report 'bad or very bad' health, compared to just 2.7% of the 'higher managerial' classification (NS-SeC group 1). The correlation is even stronger when we examine data on long-term health conditions or disabilities.

**Figure 12: Proportion of people whose day-to-day activities are limited by NS-SeC classification**

![Image of bar chart showing the proportion of people whose day-to-day activities are limited by NS-SeC classification for different occupations, comparing England and Lincolnshire.](chart.png)
In figure 12, we see that in Lincolnshire, 47% of those classified as 'never worked or long-term unemployed' say that their day-to-day activities are limited in some way. This proportion is ever higher in East Lindsey – where over half of all people in this NS-SeC classification say that their activities are limited by a health condition or disability.

Interestingly, figure 12 demonstrates that across the Lincolnshire districts this proportion is always higher than the England value of 40.2% - indicating that in Lincolnshire someone with a limiting condition is more likely to be long-term unemployed than in other areas of the country. Further study in this area would be warranted, but a speculative conclusion here would be that this reflects the manual nature of much of Lincolnshire's work. Perhaps it is reasonable to expect that people with a limiting condition would find employment easier to come by in an area with a higher proportion of static, non-manual jobs such as managerial, office or administrative roles.

Conclusions

The link between poor health and old age is clear. It follows, then, that an area that has a relatively higher proportion of elderly residents will have a correspondingly higher burden on local health and social care services.

The data from the 2011 census makes it clear that Lincolnshire's population is proportionally older than the England population, and that this trend is particularly evident in East Lindsey.

Furthermore, comparison with the 2001 Census data indicates that the proportion of older people within Lincolnshire's population has increased in the last 10 years – something that has a profound effect on health services across Lincolnshire, with the possible exception of Lincoln itself, where the university continues to create an influx of younger, predominantly more healthy, people.

When it is also considered that the East of Lincolnshire also has many areas of deprivation, and a low-skill, low-wage economy, it is clear that the data from the 2011 Census supports further work to address the burden on health services in the east, and the inequalities in health between both Lincolnshire and the rest of England, and between the more deprived, coastal regions of Lincolnshire and the more affluent areas of Lincoln and the Kestevens.
Further information on the 2011 Census


2011 Census background

ONS is responsible for conducting a census in England and Wales every ten years. The most recent census of England and Wales took place on 27 March 2011, with a number of new approaches designed to improve census return rates in all areas and with all population groups. These included:

- wide engagement in the community with the help of local authorities, representatives of hard-to-reach groups and accessibility groups and a national publicity campaign
- post-out of all household questionnaires (around 25 million), based on a newly developed national address register
- online completion: people were able to complete and submit their answers online or fill in and return the paper questionnaire
- questionnaire tracking and targeted field follow-up: to identify, follow up and assist households which had not returned a questionnaire

Sources:

Office for National Statistics (ONS) National Statistics websites:

www.statistics.gov.uk | www.ons.gov.uk

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